

## **REMARKS**

This is an Amendment and Reply to the Office Action dated May 20, 2004 and is being submitted with a Request for Continued Prosecution (RCE). Claims 12, 13, 15, and 17-22 are pending in this application. By this Amendment, new claim 23 has been added. Accordingly, claims 12, 13, 15 and 17-23 are now at issue.

In the Office Action, the Examiner has: (A) rejected claims 16, 21 and 22 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention; and (B) rejected claims 12, 13 and 15-22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 2,777,427 to Nichols in view of U.S. Patent No. 5,560,282 to Trenner et al. The Examiner's rejections are each addressed below.

### **A. Section 112 Rejections of Claims 16, 21 and 22**

The Examiner has rejected claims 16, 21 and 22 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Claim 16 has been deleted. Claims 21 and 22 have been amended in accordance with the Examiner's suggestions. Accordingly, these rejections should be withdrawn.

The Applicant notes that these amendments are not narrowing amendments, but merely amendments that clarify the Applicant's invention.

### **B. Section 103(a) Rejection of Claims 12, 13, 15 and 17-22**

In this rejection, the Examiner contends that claims 12, 13, 15 and 17-22 are rendered obvious by Nichols in view of Trenner et al. The Applicant respectfully traverses the Examiner's contention.

The Examiner contends that it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the toothed area of Nichols integral with the shaft and having a diameter slightly smaller than the larger diameter bearing site for the purpose of ease of assembly and to prevent damaging the toothed area. The Examiner further notes that a groove between each bearing site and the toothed area would need to be added to the shaft in Nichols to accommodate the modifications made to the motor Nichols in this combination, i.e., to accommodate

the reinforcing flanges 72 of the piston disclosed in Nichols.

The Applicant submits that the Examiner's contentions do not support a prima facie showing of obviousness because, among other things:

- the extensive modifications required by the Examiner are neither taught nor suggested by the cited art;
- the Examiner actually impermissibly relies on hindsight and utilizes the Applicant's claimed invention as a roadmap in an attempt to "piece together" elements of the Applicant's claimed invention; and
- the modifications required by the Examiner would actually destroy the functionality of the motor of Nichols.

Accordingly, the Examiner's obviousness rejection is improper and should be withdrawn.

The Examiner essentially contends that it would have been obvious to one of ordinary skill in the art to first take the toothed area of Nichols and make it integral with the shaft and then to make the toothed area a smaller diameter than the other portions of the shaft, and then modify Nichols by adding slots or grooves in the shaft to accommodate the reinforcing flanges 72 of the piston disclosed in Nichols. However, nowhere in the cited references is such an extensive modification either taught or suggested. Neither do any of the references provide any motivation for such an extensive modification. Indeed, the very extent of the modifications set forth by the Examiner belies "obviousness."

The extensive modifications to the cited references made by the Examiner suggests that the Examiner has improperly relied on "hindsight" to attempt to arrive at the Applicant's claimed invention. The Examiner appears to have relied upon the Applicant's claimed invention as a roadmap to "piece together" elements of the Applicant's claimed invention. Indeed, the Examiner must rely upon hindsight because neither Nichols, Trenner et al., nor any other evidence of record provides the requisite teaching, suggestion or motivation to properly combine these references.

Even if these references were properly combinable, the functionality of Nichols would be destroyed. Even if it was proper to modify Nichols by adding grooves to accommodate the reinforcing flanges 72 of the piston disclosed in Nichols, as well as integrating the teeth into the shaft such that the toothed area has a diameter smaller than the larger diameter bearing sites, it clearly appears that these grooves would pass through the center axis of the shaft, thereby severely, if not

completely, impairing the functionality of the shaft.

In addition to the above, the Applicant further notes that both Nichols and Trenner et al. fail to recognize—and actually teach away from solving—the problems solved by the Applicant's claimed invention. For example, according to one aspect of the Applicant's claimed invention, two bearing sites of identical diameter are utilized, which minimizes axial forces on the shaft when the inner volume of the cylinder is pressurized. This aspect is neither realized nor appreciated by Nichols or Trenner et al. inasmuch as the inner volume of the actuator disclosed in both of these references is not pressurized in use. Indeed, the outer volumes of the actuator of Nichols and Trenner—defined by the two active surfaces (piston heads) of the piston—define the pressurized volumes. Thus, this problem would never be encountered and would not provide motivation to even attempt to modify Nichols.

Based at least on the foregoing, the Applicant respectfully submits that the Examiner's obviousness rejection is not proper and should therefore be withdrawn.

#### **New Claim 23**

The Applicant submits that new claim 23 is allowable over the cited art for at least one or more of the same reasons set forth above.

### Conclusion

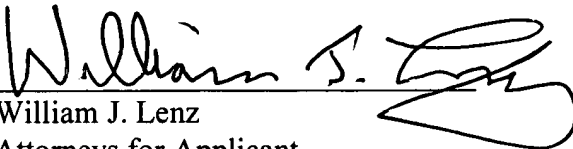
Based at least on the foregoing, the Applicant respectfully submits that claims 12, 13, 15, and 17-23 are allowable over the cited art and therefore requests that these claims be allowed.

Should anything further be required, a telephone call to the undersigned at (312) 226-1818 is respectfully requested. Additionally, if any charges or fees must be paid in connection with this amendment and reply, they may be paid out of our Deposit Account No. 50-0545.

Respectfully submitted,

FACTOR & LAKE, LTD.

Dated: September 20, 2004

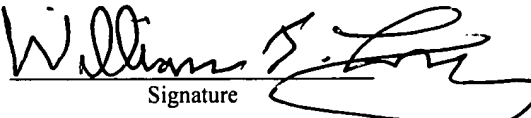
  
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### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Patent Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 20, 2004.

William J. Lenz

Name of Applicant, assignee, applicant's attorney or Registered Representative

  
Signature